

Amendments to the Claims

The current listing of the claims replaces all previous amendments and listings of the claims.

1.-6. (Canceled)

7. (Currently Amended) ~~The A probe apparatus of claim 1, wherein the sensor is~~
comprising:

a mounting member on which an object to be inspected is mounted, the mounting member configured to adjust a temperature of the object;

a probe card arranged opposite the mounting member;

a driving mechanism configured to change a relative positional relationship between the mounting member and the probe card; and

sensor means detecting a displacement of the probe card at a center of the probe card,
the sensor means provided at a part of the apparatus to which the probe card is fixed.

8. (Currently Amended) The probe apparatus of claim 7, wherein the sensor means is a laser displacement sensor or a capacitive sensor.

9. (Original) The probe apparatus of claim 7, wherein the driving mechanism moves the mounting member in X, Y and Z directions.

10.-12. (Canceled)

13. (New) A probe apparatus comprising:

a mounting member for mounting thereon an object to be inspected;

a probe card provided with a plurality of probe pins;

a driving mechanism configured to change a relative positional relationship between the mounting member and the probe card; and

a sensor unit, provided at a part of the apparatus to which the probe card is fixed, configured to detect a displacement of a region of the probe card where the probe pins are located.

14. (New) The probe apparatus of claim 13, wherein the probe card includes a main surface where the probe pins are provided and a back surface opposite the main surface, and the sensor unit is configured to detect the displacement from a measuring point at the back surface.

15. (New) The probe apparatus of claim 14, wherein the measuring point corresponds to a center of the probe pins.

16. (New) The probe apparatus of claim 13, wherein the sensor unit includes a laser beam generating device and a photo sensor fixedly mounted to the part of the apparatus, the photo sensor provided across the probe card from the laser beam generating device.

17. (New) The probe apparatus of claim 13, further comprising a fixed top plate located at an upper part of the probe apparatus, the probe card and the sensor unit fixedly mounted to the top plate.

18. (New) The probe apparatus of claim 17, wherein the driving mechanism is configured to move the mounting member in X, Y and Z directions.

19. (New) The probe apparatus of claim 17, wherein the probe card and the sensor unit are placed at bottom and top surfaces of the top plate, respectively, and the mounting member is disposed below the probe card.

20. (New) A probing method for use with a probe apparatus, wherein the probe apparatus includes a mounting member for mounting thereon an object to be inspected, a probe card provided with a plurality of probe pins and a driving mechanism which changes a relative positional relationship between the mounting member and the probe card, the probing method comprising the step of:

detecting a displacement of a region of the probe card where the probe pins are located with respect to the position of a part of the apparatus to which the probe card is fixed.

21. (New) The probing method of claim 20, wherein the detecting step includes the step of sensing the displacement from a measuring point at a back surface of the probe card, the back surface located opposite a main surface of the probe card where the probe pins are provided.

22. (New) The probing method of claim 21, wherein the measuring point corresponds to a center of the probe pins.

23. (New) The probing method of claim 21, wherein the sensing step includes the steps of:

transmitting a laser beam toward the measuring point; and

receiving a laser beam reflected from the measuring point,

wherein the transmitting and receiving steps are carried out at two separate locations corresponding to two opposite sides of the probe card.

24. (New) A probe apparatus comprising:

a mounting member for mounting thereon an object to be inspected;

a probe card provided with a plurality of probe pins;

a driving mechanism configured to change a relative positional relationship between the mounting member and the probe card; and

means for detecting a displacement of a region of the probe card where the probe pins are located with respect to the position of a part of the apparatus to which the probe card is fixed.

25. (New) The probe apparatus of claim 24, wherein the probe card includes a main surface where the probe pins are provided and a back surface opposing the main surface, and the means for detecting detects the displacement from a measuring point at the back surface.

Application No. 10/642,751

Reply to Office Action of September 9, 2004

26. (New) The probe apparatus of claim 25, wherein the measuring point corresponds to a center of the probe pins.